Physical Baseline Studies 2000
Deep Water Site,

Mouth of the Columbia River

- Sidescan Sonar (SSS) / RoxAnn™ Sediment Characterization
- Sediment Physical and Chemical Characterization
- Sediment Trend Analysis / Sediment Acoustic Characterization

Seafloor Mapping Survey, Deep Water Site,

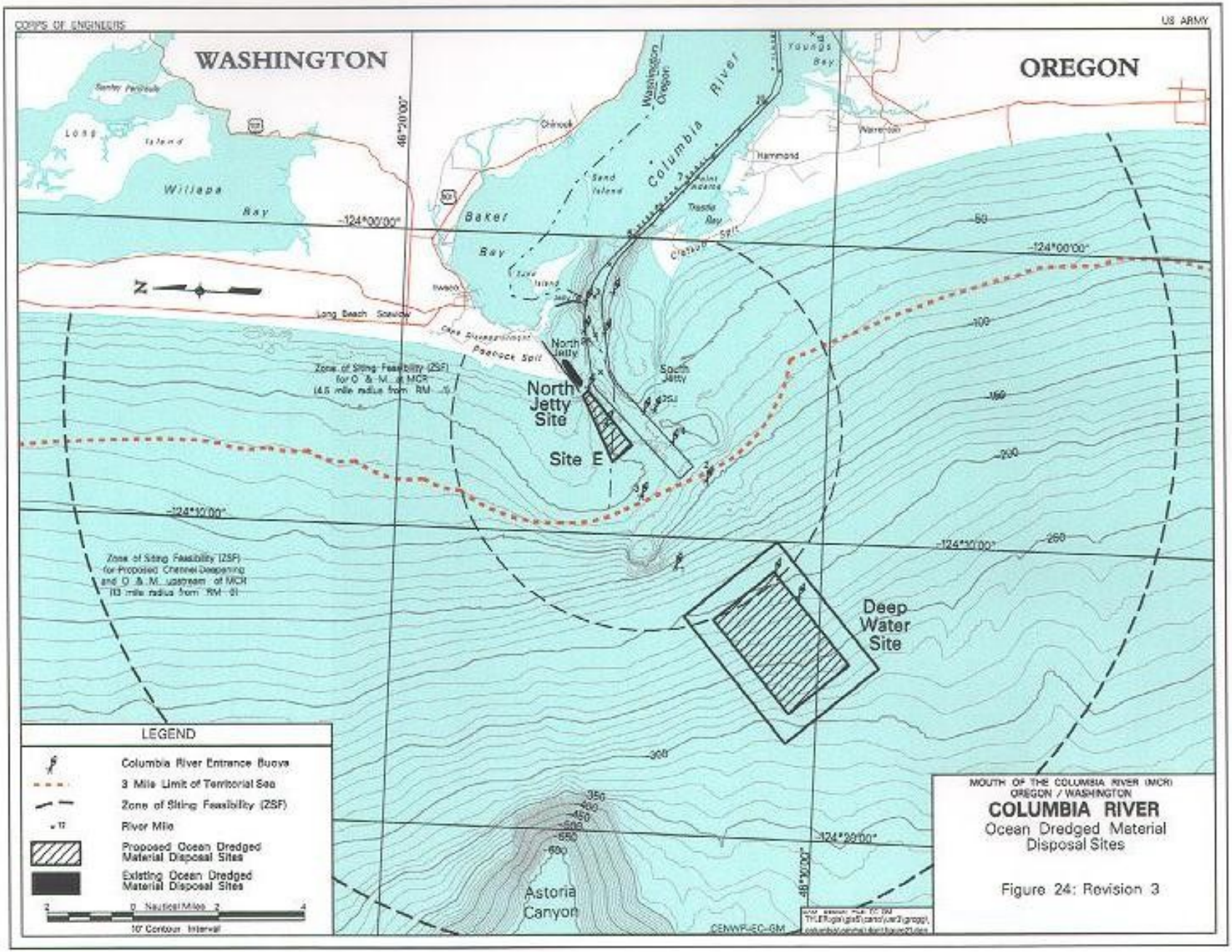
Mouth of the Columbia River

October 2-7, 2000

Deep Water Site

Physical Baseline Studies

- Acoustic Side Scan Sonar SSS
- RoxAnn™ Seabed Classification System


CORPS OF ENGINEERS
US ARMY
WASHINGTON
OREGON
Willapa Bay
Baker Bay
Columbia River
Washington
Oregon
Chinook
Hammond
Warrenton
Youngs Bay
Sand Island
Tansy Point
Trestle Bay
Clatsop Spit
Peacock Spit
Long Beach Peninsula
Cape Disappointment
North Jetty
South Jetty
North Jetty Site
Site E
Deep Water Site
Astoria Canyon
-124°00'00"
-124°10'00"
-124°20'00"
-124°30'00"
46°20'00"
46°10'00"
Zone of Siting Feasibility (ZSF) for O & M at MCR (4.5 mile radius from RM 0)
Zone of Siting Feasibility (ZSF) for Proposed Channel Deepening and O & M upstream of MCR (13 mile radius from RM 0)
LEGEND
Columbia River Entrance Buoys
3 Mile Limit of Territorial Sea
Zone of Siting Feasibility (ZSF)
River Mile
Proposed Ocean Dredged Material Disposal Sites
Existing Ocean Dredged Material Disposal Sites
2 0 Nautical Miles 2 4
10' Contour Interval
MOUTH OF THE COLUMBIA RIVER (MCR)
OREGON / WASHINGTON
COLUMBIA RIVER
Ocean Dredged Material Disposal Sites
Figure 24: Revision 3
CENWP-EC-GM

e 2-1. DF-1000 Tow fish and winch aboard *Hickson*.

C133

C134

C136

onar Interpretation

tone of reflectivity indicates homogeneous geomorphic Sediment identified from sample nd.

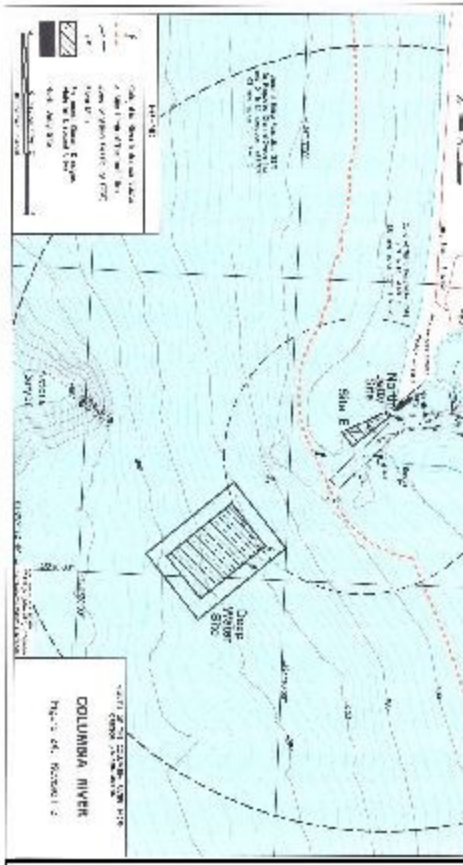
Apparent seafloor undulations

Objects in these areas are likely schools of fish near the seabed.

Objects are apparent schools of fish in water column near the side scan tow fish.

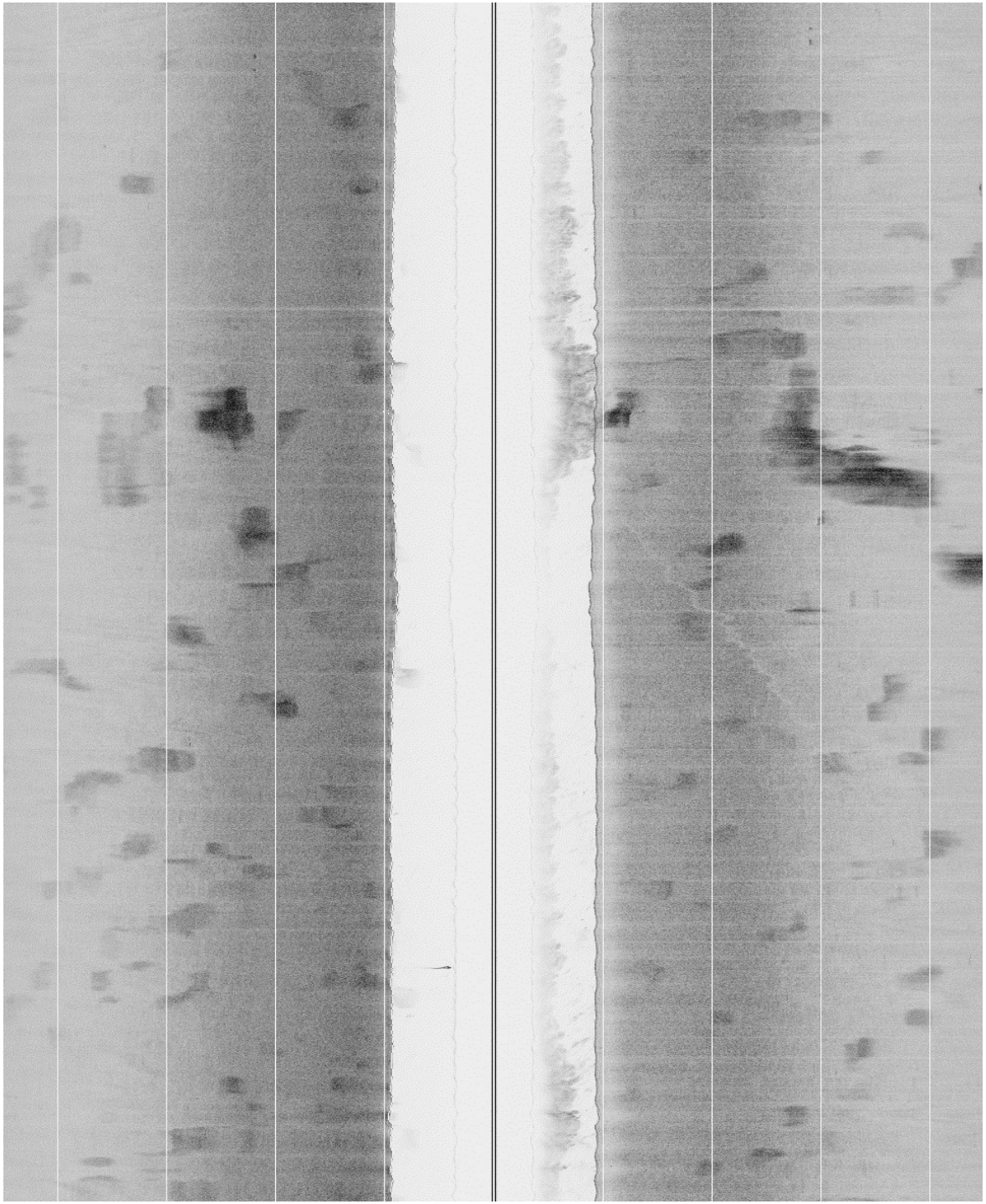
Moasic anomaly due to erroneous tow fish heading Information. Not a seabed feature.

Deep Water Site
Sonar Image of
Seabed Conditions

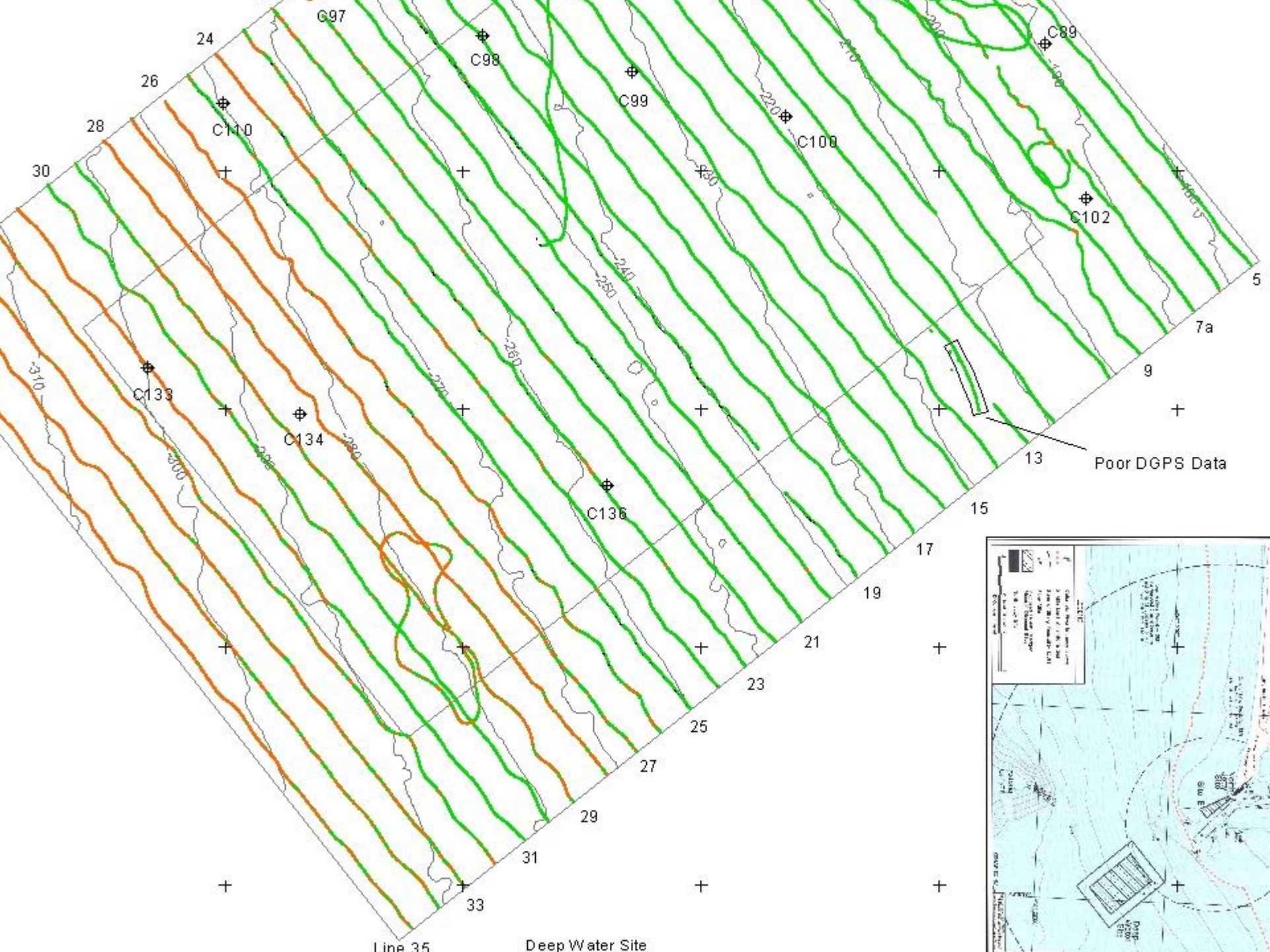


Vicinity Map

1045000 1050000 1055000 1060000 1065000 1070000



ure 2-2. RoxAnn Seabed Classification System in operation aboard *Hickson.*


C97
C98
C99
C100
C89
C102
C110
C133
C134
C136
24
26
28
30
33
31
29
27
25
23
21
19
17
15
13
9
7a
5
-310
-300
-290
-280
-270
-260
-250
-240
-230
-220
-210
-200
-190
-180
Poor DGPS Data
Line 35
Deep Water Site

CONCLUSIONS

- Homogeneous Distribution of Fine Sand
  - No detectable differentiation in Material Ty
  - Only two sediment types (RoxAnn™)
- Featureless Geomorphic Configuration
  - Apparent low relief undulations (fish?)
- No significant cultural features
- No anthropogenic debris
- Number of large schools of fish